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22.

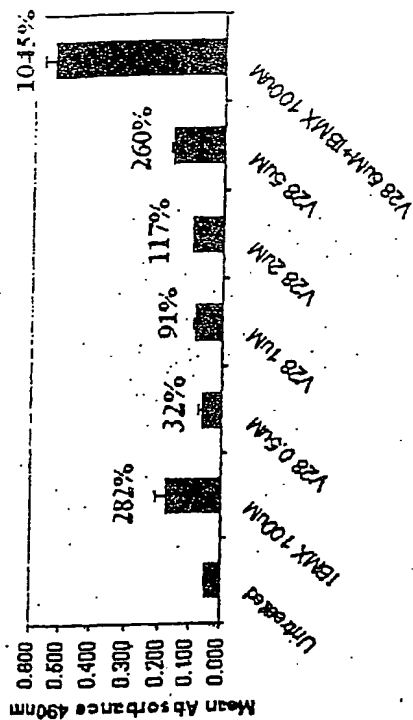
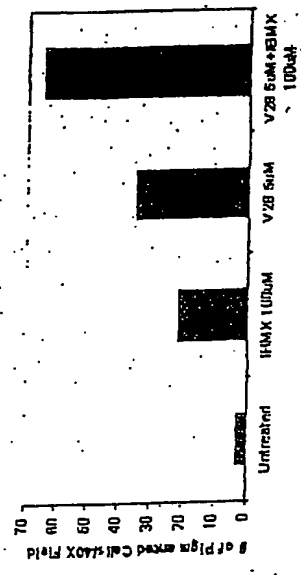
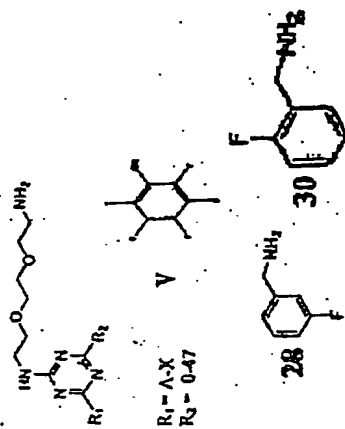
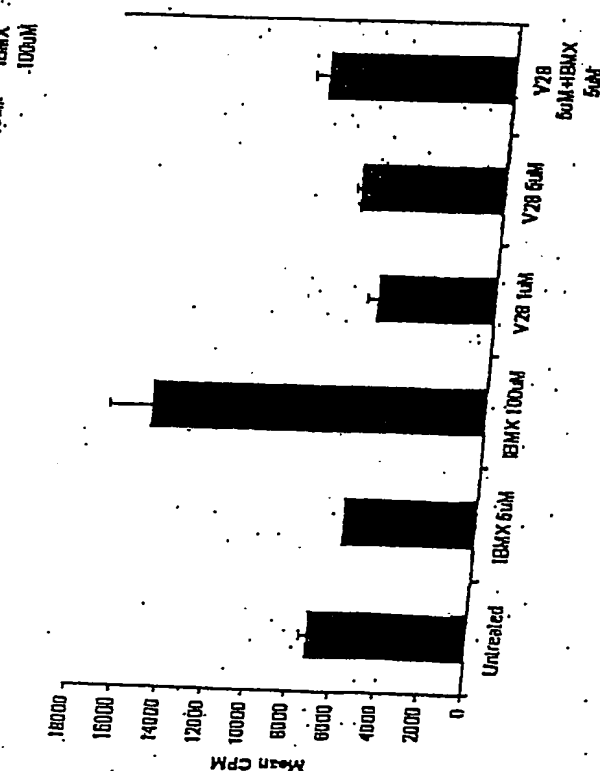
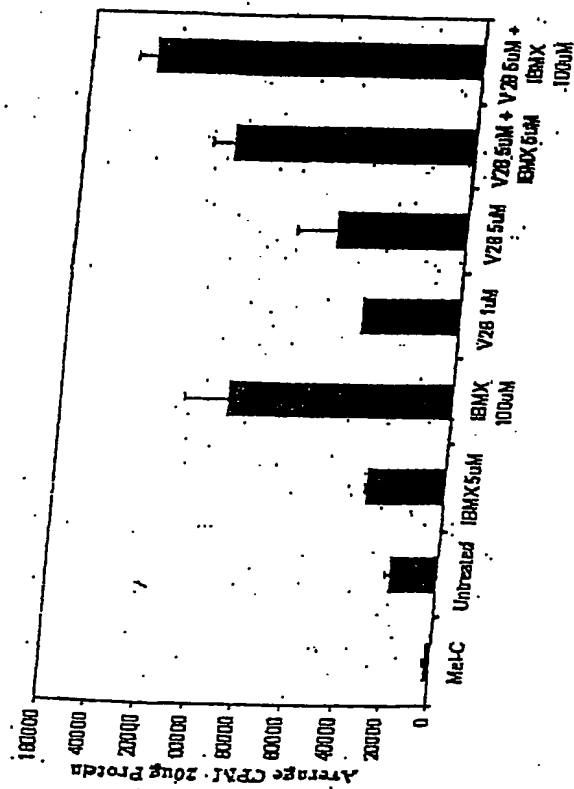
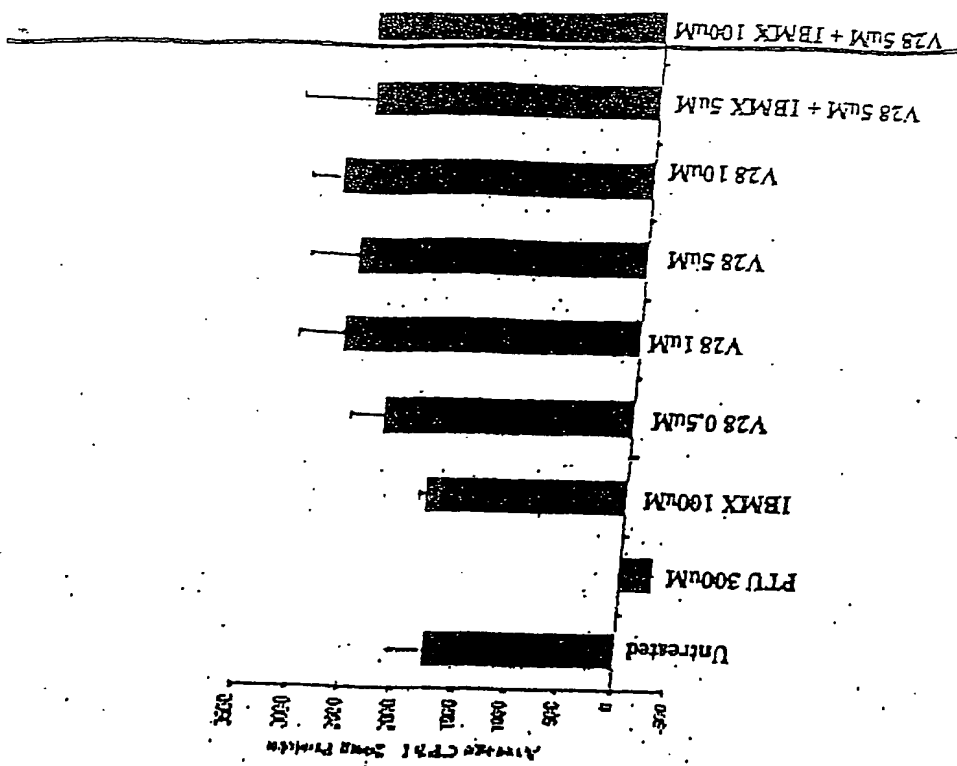


Fig. 1

Fig. 2



A

B

C

Scheme 1. Synthesis of the library compounds.

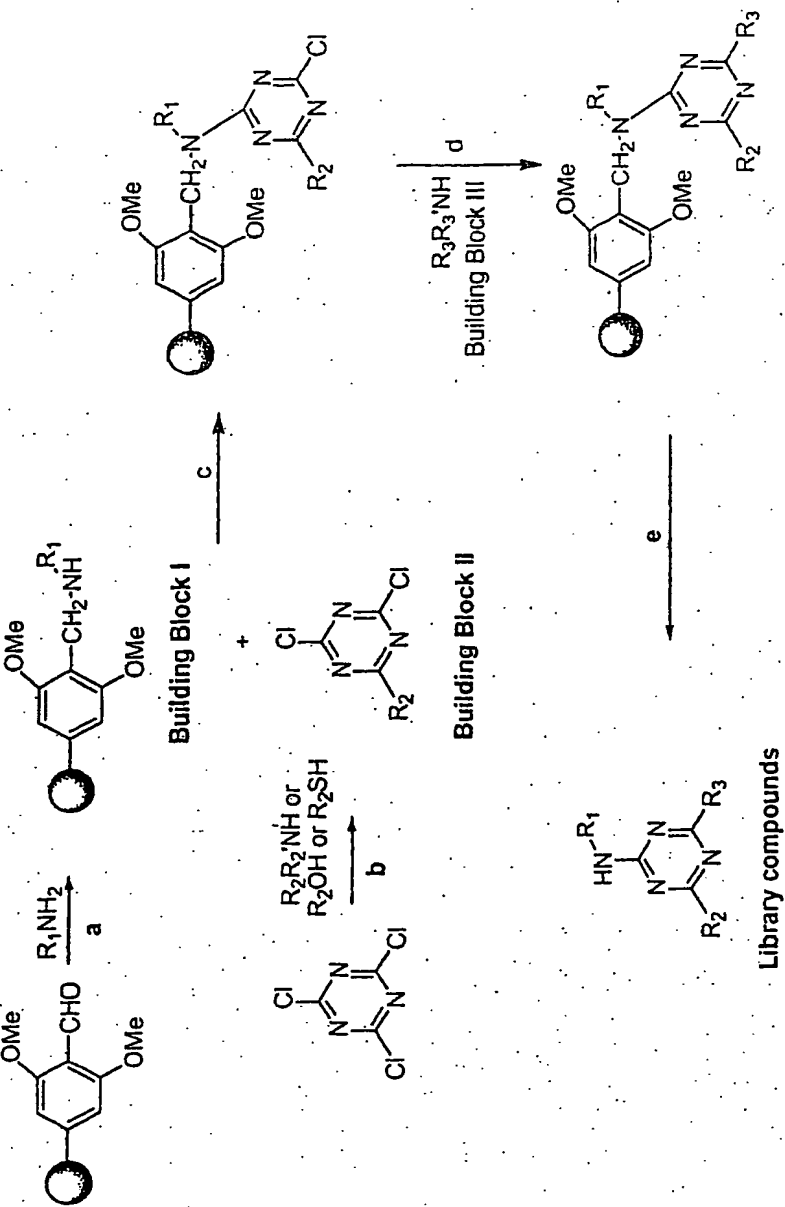


Fig. 3

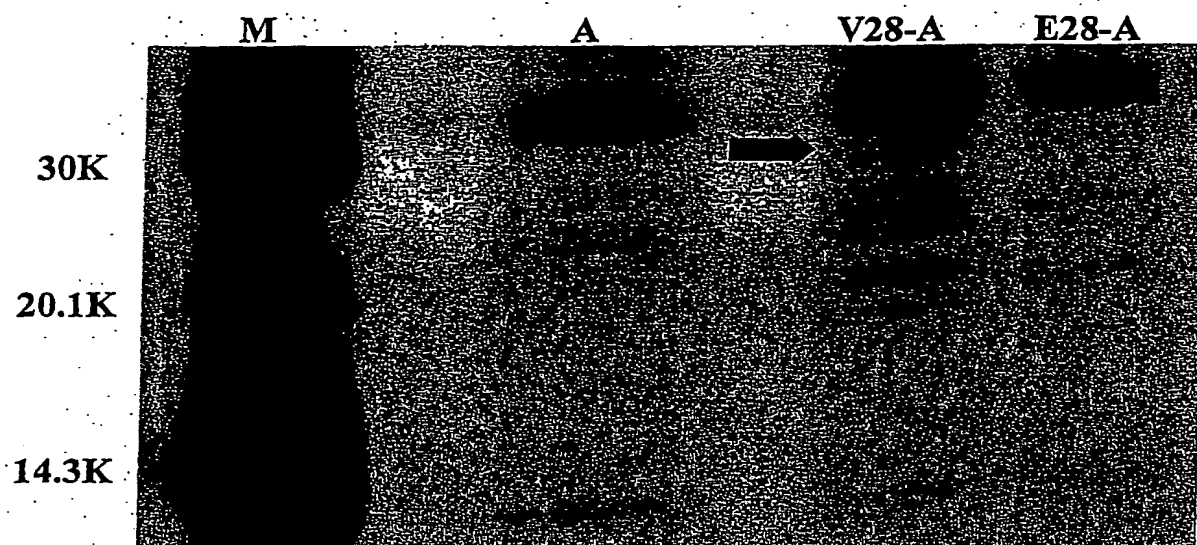


Fig. 4

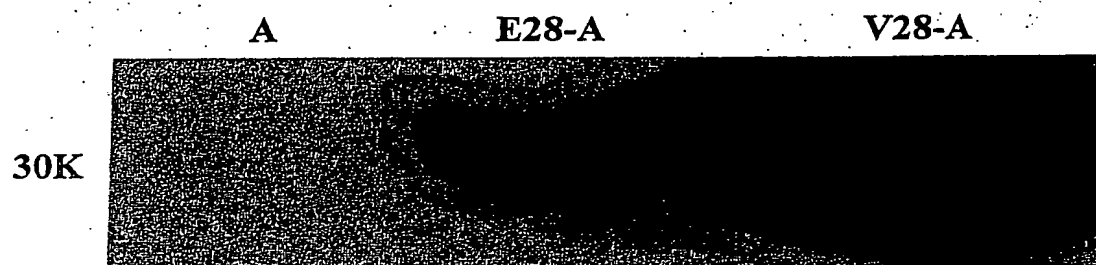
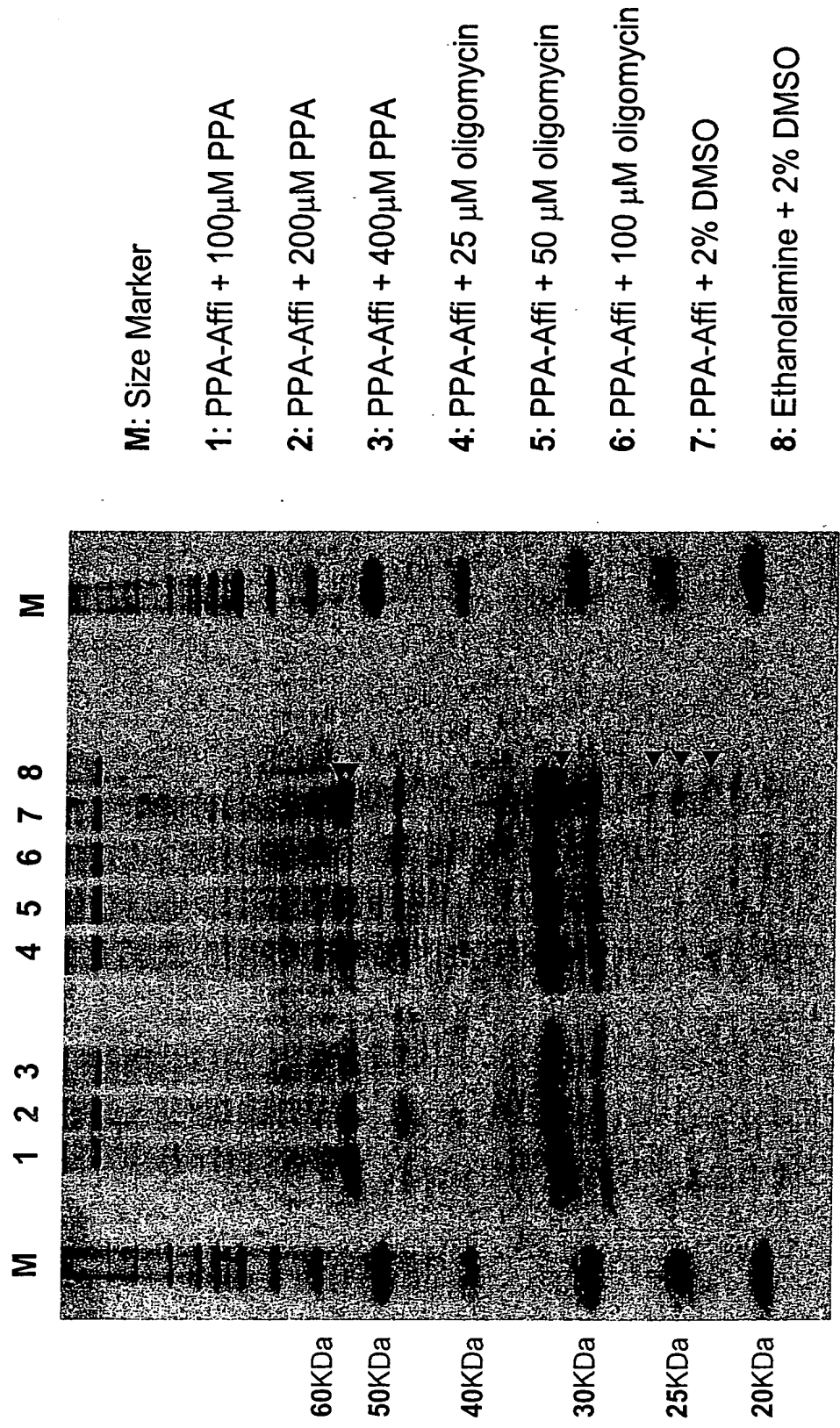


Fig. 5

Oligomycin can inhibit binding of ATPase subunits to PPA-affinity matrix



- $\alpha$ ,  $\beta$ , and  $\gamma$  subunit, Mitochondrial  $H^+$ -transporting  $F_1F_0$ -ATPase (*Mus musculus*)

Fig. 6

Affinity chromatography: Competition

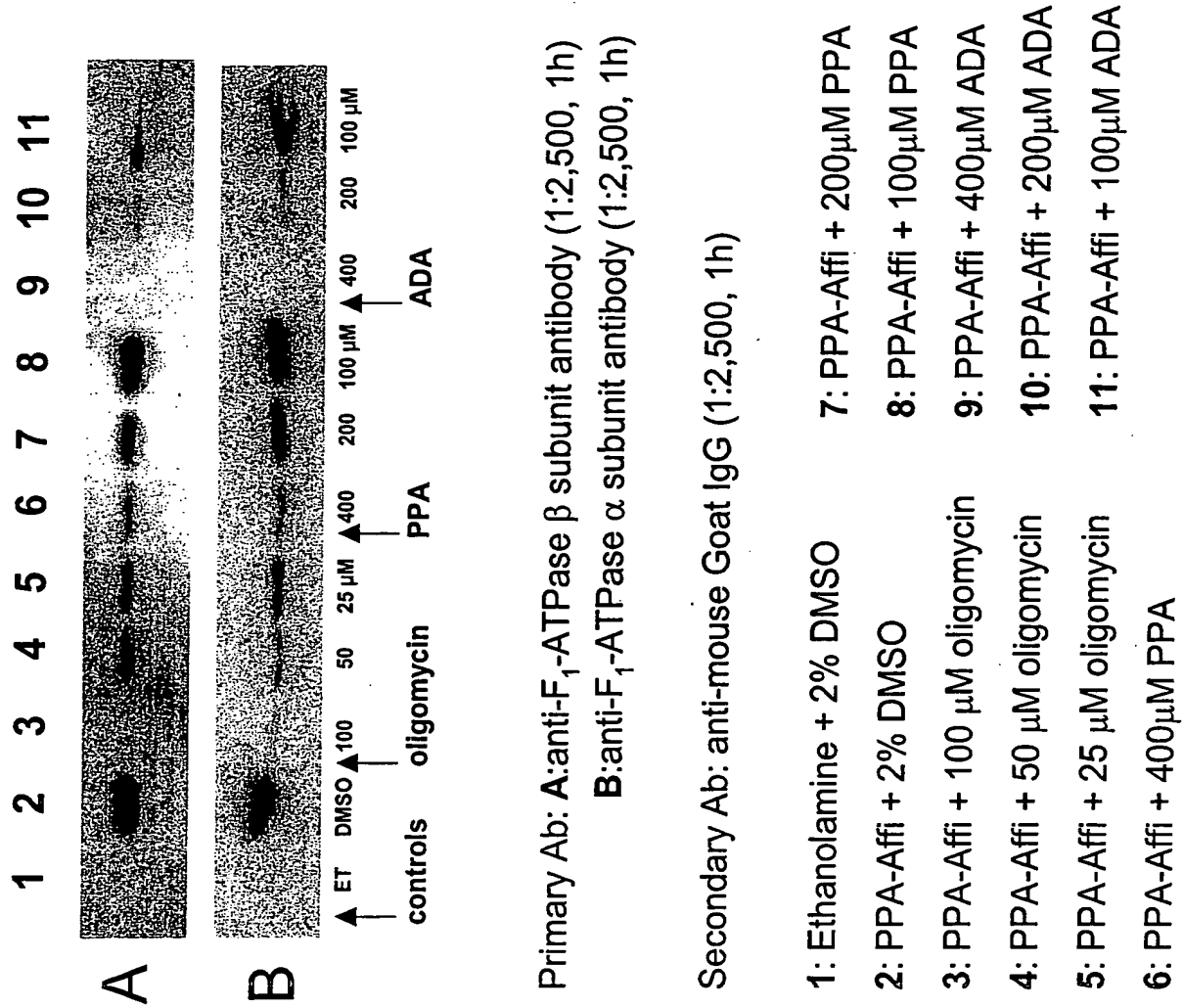
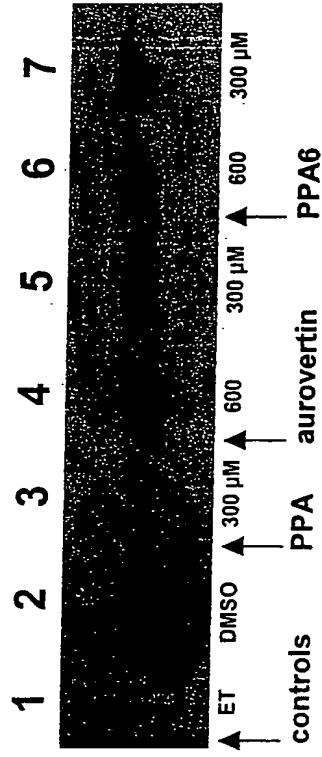


Fig. 7



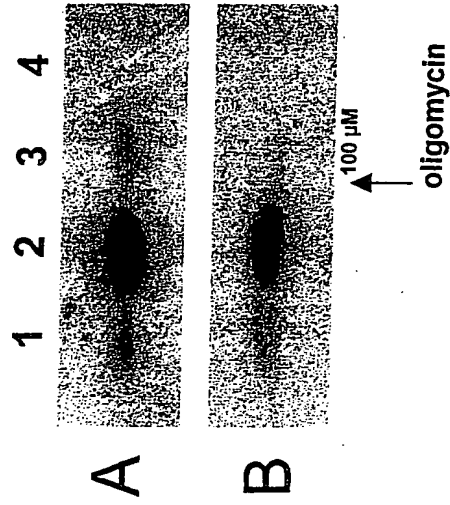
Primary Ab: anti-F<sub>1</sub>-ATPase  $\beta$  subunit antibody  
(1:2,500, 1h)

Secondary Ab: anti-mouse Goat IgG (1:2,500, 1h)

- 1: Ethanolamine-Affi + 2% DMSO
- 2: PPA-Affi + 2% DMSO
- 3: PPA-Affi + 300 $\mu$ M PPA
- 4: PPA-Affi + 600 $\mu$ M aurovertin
- 5: PPA-Affi + 300 $\mu$ M aurovertin
- 6: PPA-Affi + 600 $\mu$ M PPA6
- 7: PPA-Affi + 300 $\mu$ M PPA6

Fig. 8





Primary Ab: **A:** anti-F<sub>1</sub>-ATPase  $\beta$  subunit antibody  
(1:2,500, 1h)

**B:** anti-F<sub>1</sub>-ATPase OSCP antibody  
(1:2,500, 1h)

Secondary Ab: anti-mouse Goat IgG (1:2,500, 1h)

1: PPA6-Affi + 1% DMSO

2: PPA-Affi + 1% DMSO

3: PPA-Affi + 100 $\mu$ M oligomycin

4: Ethanolamine-Affi + 1% DMSO

\* OSCP(oligomycin sensitivity conferring protein)

Fig. 9

1 2 3 4



100  $\mu$ M

oligomycin

Primary Ab: anti- $F_1$ -ATPase d subunit antibody  
(1:2,500, 1h)

Secondary Ab: anti-mouse Goat IgG (1:2,500, 1h)

1: PPA6-Affi + 1% DMSO

2: PPA-Affi + 1% DMSO

3: PPA-Affi + 100 $\mu$ M oligomycin

4: Ethanolamine-Affi + 1% DMSO

Fig. 10

# 72h drug treatment

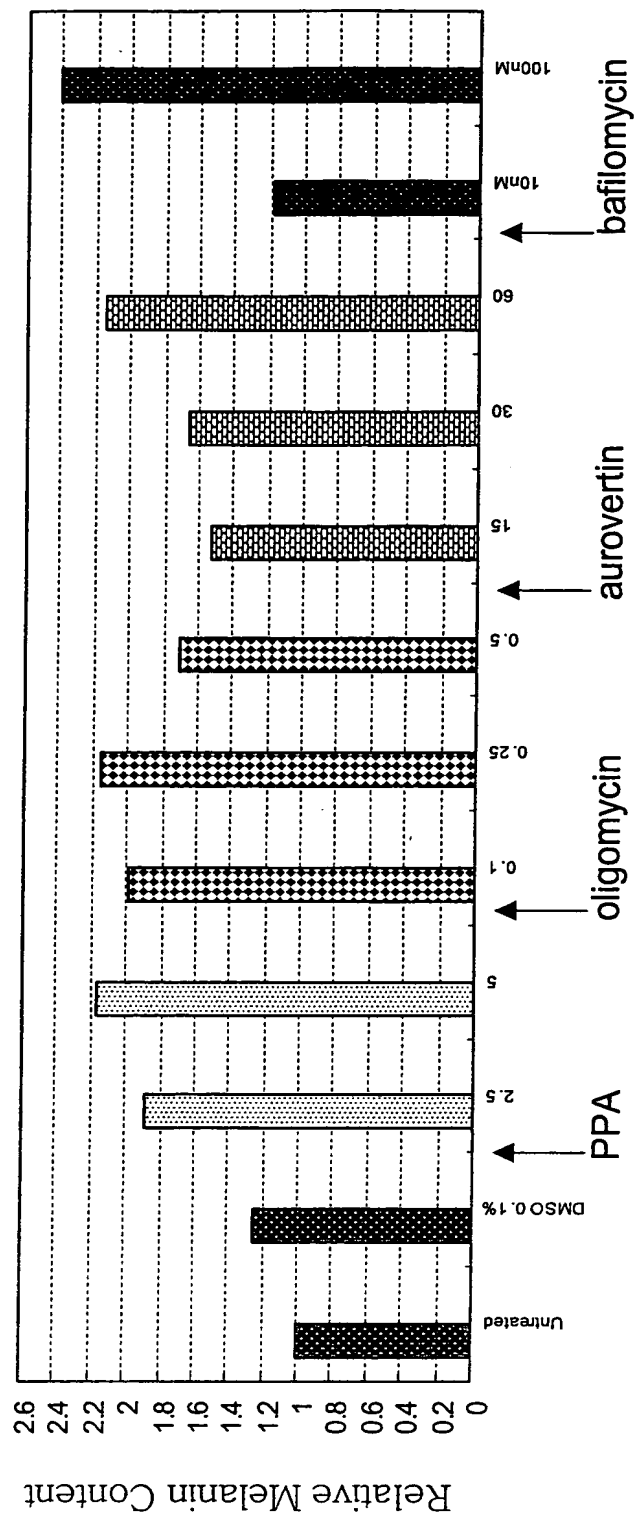


Fig. 11

**PPA and oligomycin in Mel-a cells (24h incubation)**

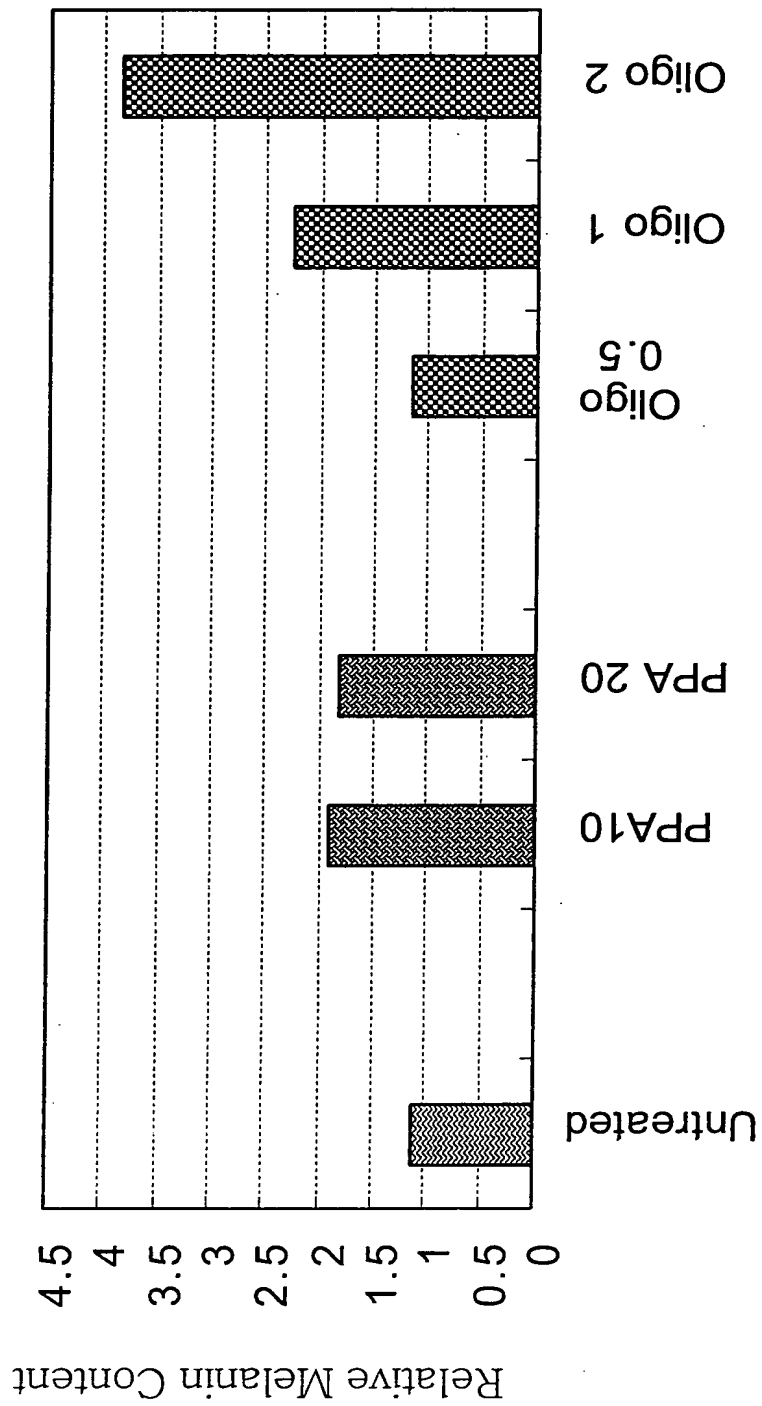


Fig. 12

# Aurovertin in Mel-a cells (24h incubation)

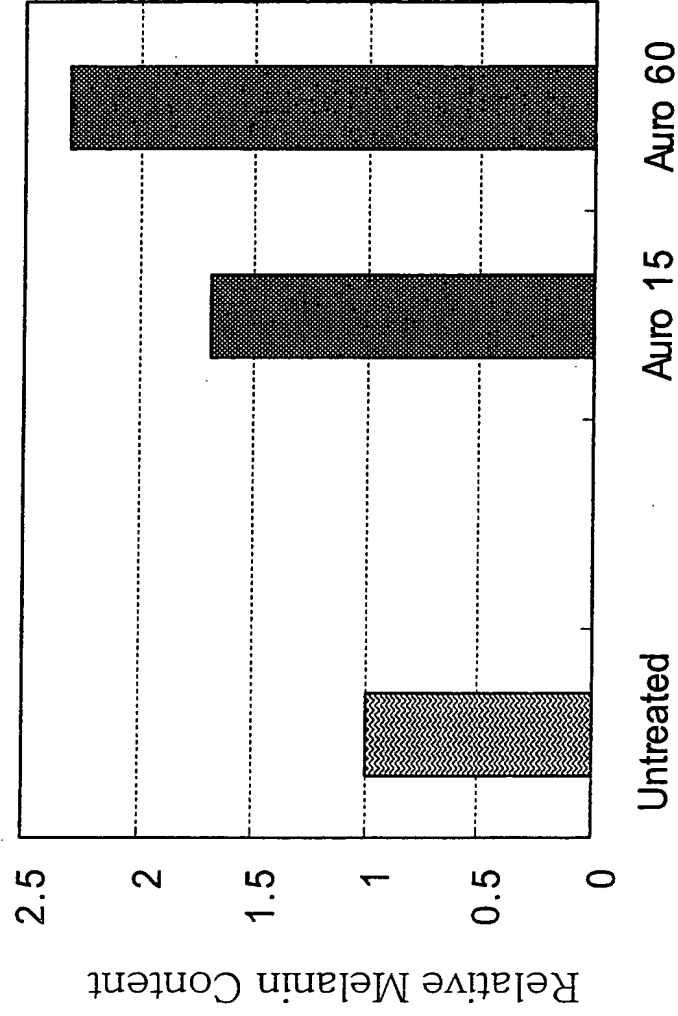
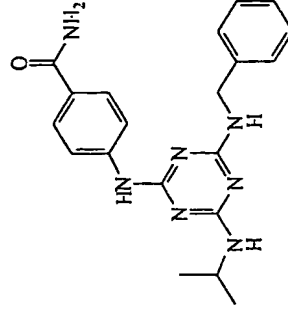
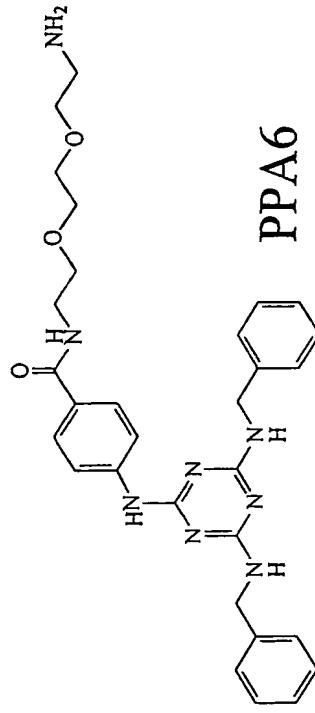
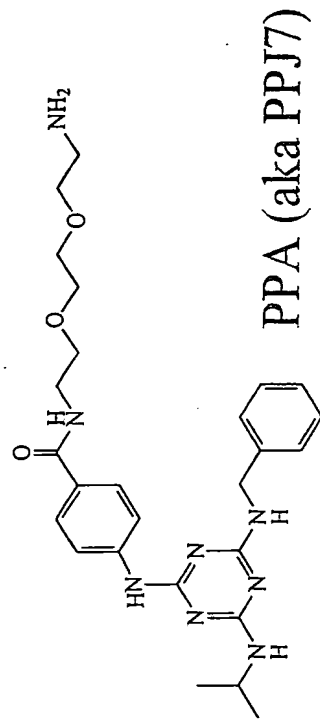


Fig. 13

# Structures of compounds PPA & ADA (active pigment promoters) / PPA6 (inactive)



ADA